Blue

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** RP **Date:** 09.10.30 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr / Revision Nbr									
100	DOCUMENT CONTROL	0.00							
DC	**Memo**	0.00							
Document Control	Photocopy bluefile and create labels as per PPP D206-667-103 CHG004					1			
110	Packaging	0.00							
Packaging	**Memo**	0.00				(1X)	&	MB 09-11-16	
Packaging									
120	BENDING MACHINE - CROSSTUBES	0.00							
CNC Bend 2	**Memo**	0.00				(1X)	&	MB	09-11-16
CNC Alpha 160 Bender	Bend tube as per Dwg D206-667-143 using CNC bender program								

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC15- Crosstube Dimensional Check	0.00							
QC	Memo	0.00							
Quality Control									

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
Crosstubes	Crosstubes					1X	0	MB 09-11-17	
Crosstubes	**Memo**	0.00							

Crosstubes

1-Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill pilot holes as per Dwg D206-667-143.Drill only the top (2) holes.

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-141.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143 Inside of Cuff(Donot engrave on outside of tube)

10-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

Work Order ID 53277

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Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Crosstubes Chemical Conversion	0.00				(1X)	0	MB	09-11-17
HandFXtube	**Memo**	0.00							
Hand Finishing Crosstubes									
160	QC3- Inspect Part Finish	0.00 => 8 09/11/17				(11)	0		
QC	**Memo**	0.00							
Quality Control									
170	QC5- Inspect part completeness to step on W/O	0.00				(10)	0		
QC	**Memo**	0.00 => 8 09/11/17							
Quality Control									

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Outsource process - NDT per QSI038 4.1	0.00							
Outsource2	**Memo**	0.00							
Outsource process - NDT	CROSSTUBES								
190	Packaging	0.00							
Packaging	**Memo**	0.00							
Packaging	Ensure copy of NDT results attached to work order.								
200	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control									

PO: 10791

CL 09/11/18 (1)

09/11/18 (1)

09 11 18 (1)

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	SprayPaint	0.00							
SprayPaint						M/	09	11	18 (1)
Spray Painting	**Memo**	0.00							
	PRIME GREY B110918 SPRAY PAINT DELFLEET BLUE B113171 CLEAR DELFLEET B110896								
220	QC14- Inspect Spray Paint	0.00							
QC						RK	09	11	19
Quality Control	**Memo**	0.00							
	INSPECT SPRAY PAINT								

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230		0.00				ml	09	11	25 (1)
Crosstubes	Crosstubes								
Crosstubes	**Memo**	0.00							

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (2) Aft holes should be facing up.
A/R Magnobond 6398 : 1124/7 exp: 01/2011

2-Install supports and clamps as per Dwg D206-667-143. Torque clamps to 80-100 in lb => ml 09 11 26 (1)

3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint. => ml 09 11 25 (1)

240	QC5- Inspect part completeness to step on W/O	0.00				(2)	f		
QC		=> 8 09/11/26							
Quality Control	**Memo**	0.00							

Rubber Cusion's
D3595-063-395 B414667 X4
ml 09.11.25

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
Packaging	**Memo**	0.00				4/4/27			PW
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
QC	**Memo**	0.00						05.11.27	
Quality Control									
270		0.00							
Packaging	Packaging								
Packaging	**Memo**	0.00				4/4/27			
Packaging	Identify and pack for shipping as per PPP D206-667-103 Location:_____ PPP Rev:D								

Work Order ID 53277

October 30, 2009 1:46:43 PM

Item ID: D206-667-103BL **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Fwd, Blue

Start Date: 29/10/2009 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 09/11/2009 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00						09/11/30	
QC	**Memo**	0.00							
Quality Control									

09-11-27

Picklist Print

October 30, 2009 1:46:48 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-30A		Purchased	No			250	Each	107.0000	4.0000			
BOLT												

Warehouse Location	Loc Qty	Loc Code	Qty Issued
Main Warehouse			
ST	107		
110467	57		M110467
112933	50		

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-32A		Purchased	No			250	Each	147.0000	4.0000		9/11/20	
Bolt												

Warehouse Location	Loc Qty	Loc Code	Qty Issued
Main Warehouse			
ST	147		
106242	3		
106519	4		
110363	17		
112082	23		
112805	50		M112805
112933	50		

Picklist Print

October 30, 2009 1:46:48 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-7A Bolt		Purchased	No			2501	Each	110.0000	10.0000		5/4/27	

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	60		
110625	7		
111668	3		
112612	50		
Main Warehouse			
t	50		
112829	50		M112829

Picklist Print

October 30, 2009 1:46:48 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516 Washer		Purchased	No			250	Each	1,560.000	18.0000		09/11/27	

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	1560		
100564	2		
106167	6		
107534	34		
107959	43		
108246	46		
108672	2		
109059	49		
109752	22		
110363	46		
110523	57		
111279	39		
112082	68		
112314	500		
112794	146		
112828	500		M11/28/28

Picklist Print

October 30, 2009 1:46:48 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN970-4		Purchased	No			250	Each	443.0000	12.0000		9/11/27	
Washer												

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	443		
104885	3		
107242	3		
107715	1		
108077	2		
108377	19		
111724	3		
112082	5		
112794	9		
112933	98		
112991	300		M11298/

D206-667-103TRNRevC		Manufactured	No				Each	2.0000	1.0000			
Crosstube Turning DetailL										D-53411	MB 09-11-10	

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
FG	2		
52829	1		
52830	1		

Picklist Print

October 30, 2009 1:50:52 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2873-043RevA		Manufactured	No				Each	41.0000	2.0000			
Nut Plate Assembly												

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	41		_____
45370	6		_____
45422	15		_____
50002	20		_____

ML 09 11 25

D2873-045RevA		Manufactured	No				Each	59.0000	2.0000			
Nut Plate Assembly												

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	59		_____
45210	3		_____
46772	16		_____
50001	40		_____

ML 09 11 25

Picklist Print

October 30, 2009 1:50:52 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID / Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2891-1RevA1		Manufactured	No				Each	73.0000	2.0000			
2.25 Support												

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	73		
40336	1		
41198	8		
43880	20		
45935	4		
46159	20		
50952	20		

Blue

B 53347

mk 09 11 25

Component Item ID / Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
BLUE MS20601-AD4W8		Purchased	No				Each	300.0000	14.0000			
RIVET												

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
ST	300		
108521	100		
112203	200		

mk 09 11 25

Picklist Print

October 30, 2009 1:50:52 PM

Work Order ID: 53277

Parent Item: D206-667-103BL

Parent Item Name: Crosstube Fwd, Blue

Comments:

Start Date: 29/10/2009 **Required Date:** 09/11/2009

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L5		Purchased	No			250	Each	1,060.000	4.0000			
Nut												

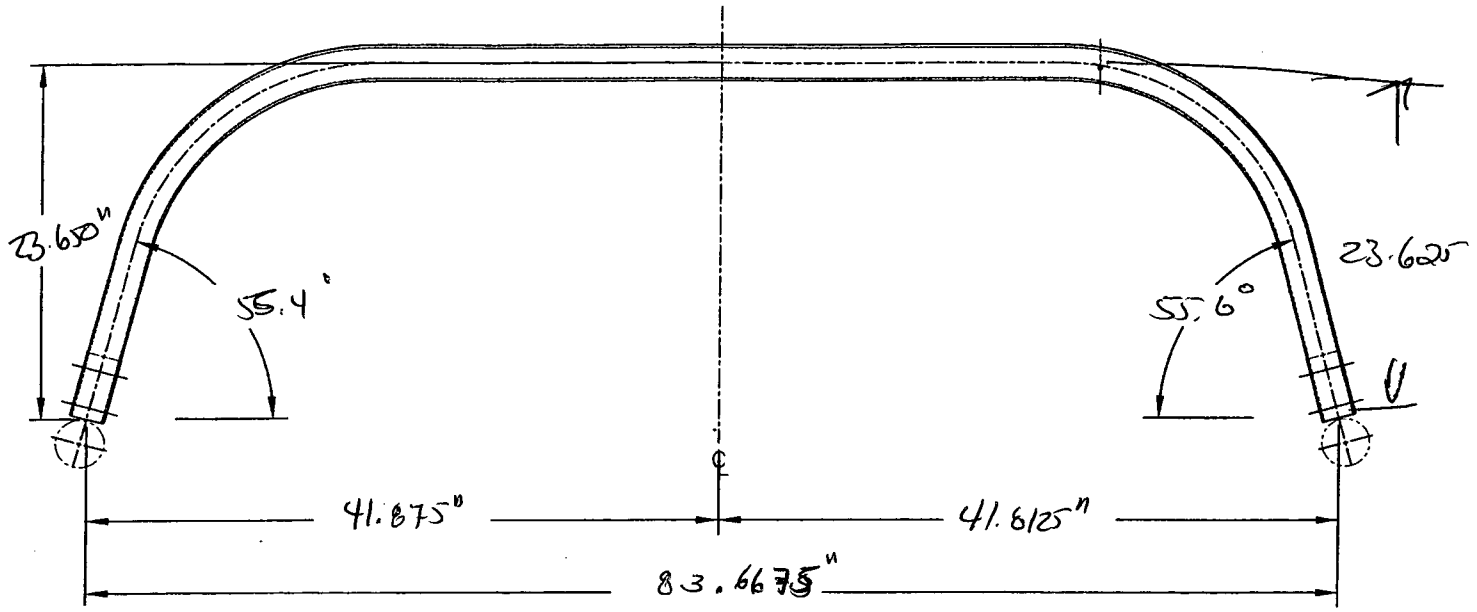
Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST	1060	
110382	10	
111127	4	
111636	46	
112314	1000	

MS21920-20		Purchased	No				Each	151.3000	4.0000			
Clamp (per MIL-DTL-8783C)												

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST	151.3	
103478	2	
106484	12	
109269	9.3	
110536	10	
111281	18	
112307	50	
112624	39	
112793	11	

DART AEROSPACE LTD	Work Order:	53277
Description: Crosstube High Fwd (206L)	Part Number:	D206-667-103
Inspection Dwg: D206-667-143 **Rev:** C		Page 1 of 1

Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.10



Comments

QC15 Inspection	
Date	07/11/16

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.06.26	Dimensions updated per Dwg Rev C	KJ	
C	09.10.22	Minimum height dimension revised	KJ	

Dart Aerospace Ltd

W/O: 53277		WORK ORDER CHANGES						
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector	
05.11.27	250	Add kit pick for packaging Route Seq. 250 to hardware in list C (for kit hardware only) & correct the ASS'Y hardware to Route 230, & x-tube TRN to route seq. 110 correct all & review to ensure all is in place - Perm change		09/11/20		05-11-27	05/11/27	
		Also add the rubber cushions for ASS'Y Route seq. 230.		09/11/20		05/11/27	05/11/27	

Part No: D206-667-103BL **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Item	Qty -143	Part Number	Description
1	X	D206-667-143	CROSSTUBE ASSEMBLY (206L HIGH FWD)
2	1	D6002-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 533277
09-10-30

RELEASED
08/11/06

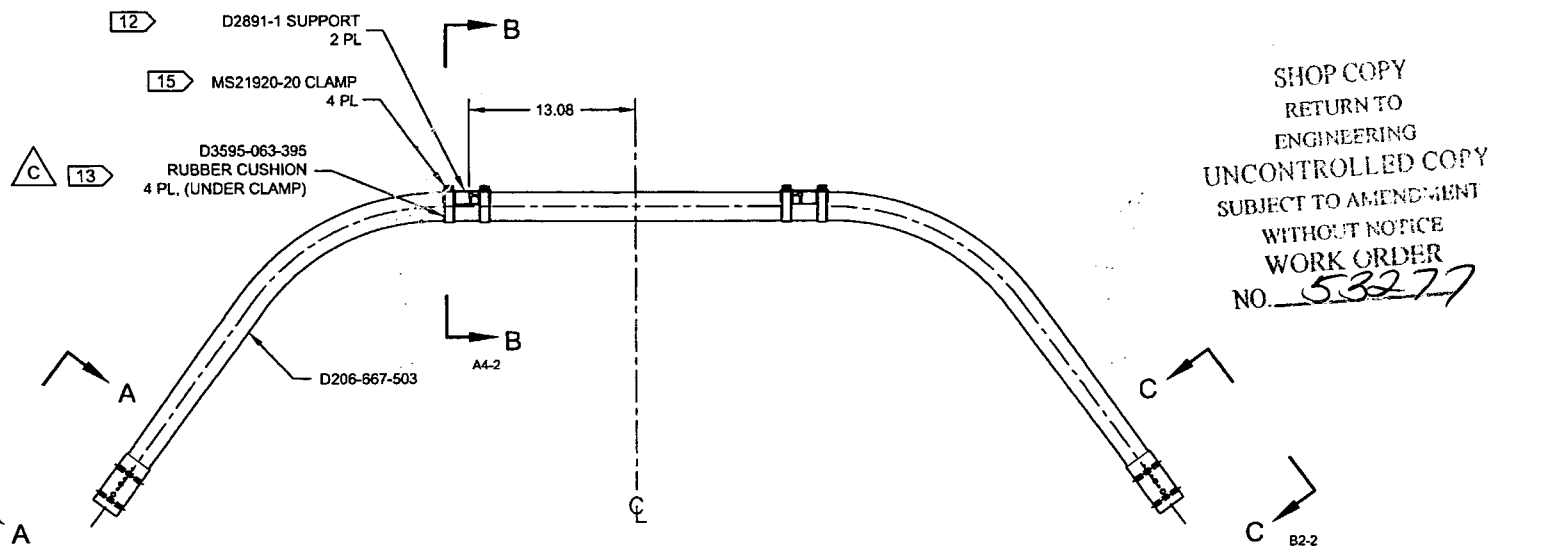
GENERAL NOTES:

1) MATERIAL: MANUFACTURED FROM D6002-115
 FINISHED LENGTH = 104.98±0.020
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
 PAINT OUTSIDE PER DART QSI 005 4.2
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-143" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
7) WEIGHT: 15.5 lbs
8) PART IS SYMMETRIC ABOUT CENTERLINE.
9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

REV.	DESCRIPTION	BY	DATE
C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCE (ZN D3-3, C4-3, C5-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17

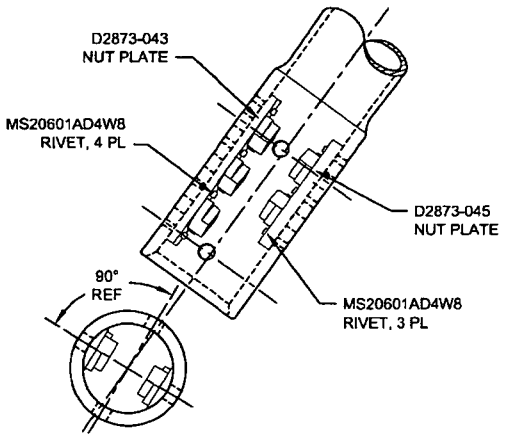
DESIGN		**DART AEROSPACE LTD**	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D206-667-143	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASS'Y (206L HIGH FWD)	NTS
DATE	08.11.06		

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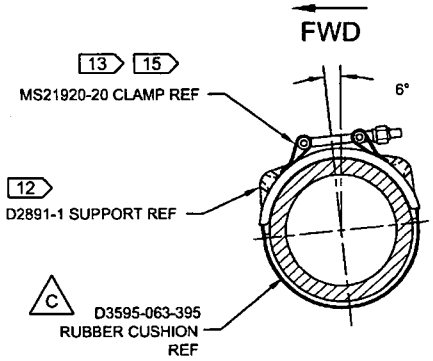


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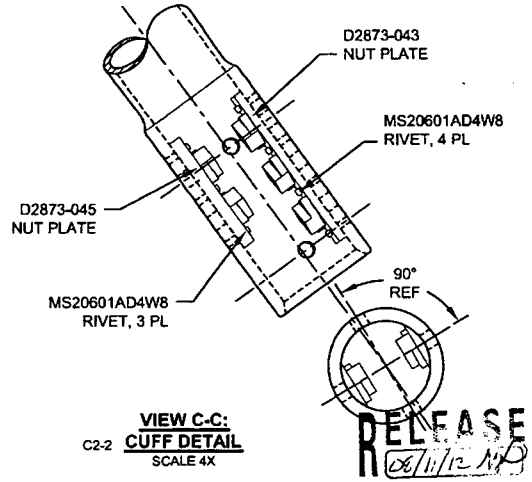
D206-667-143
ASSEMBLY DETAIL
(VIEW LOOKING FWD)



VIEW A-A:
C7-2 **CUFF DETAIL**
SCALE 4X



D5-2 **SECTION B-B**
SCALE 5X



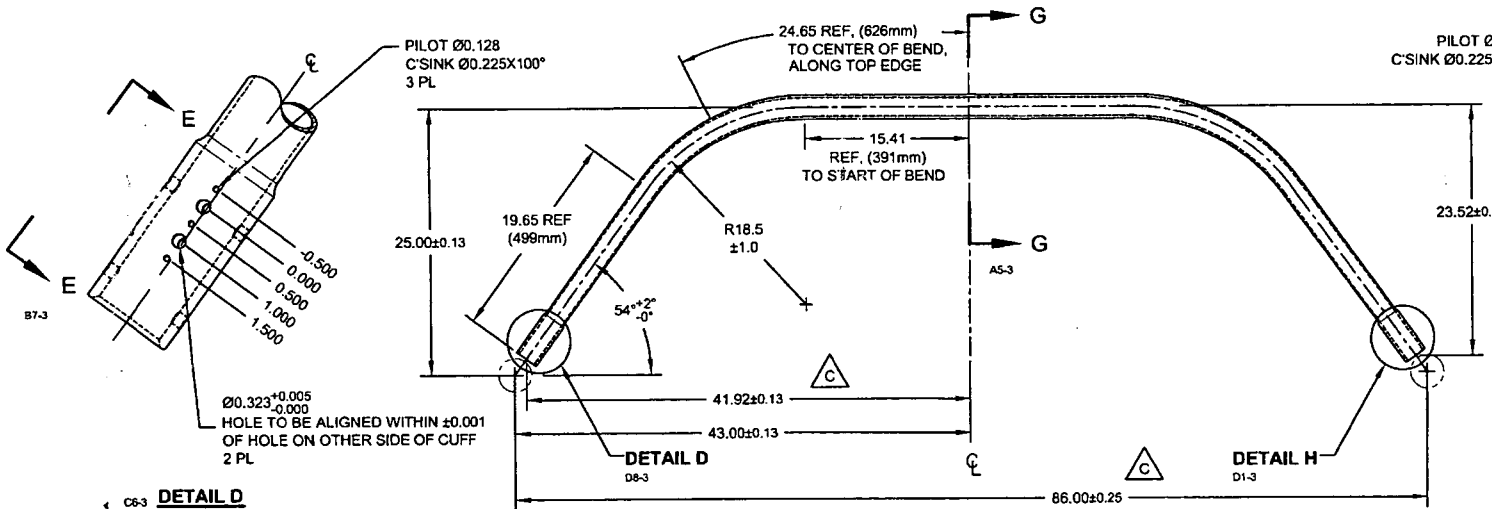
VIEW C-C:
C2-2 **CUFF DETAIL**
SCALE 4X

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06/11/12 MP

DESIGN		**DART AEROSPACE LTD**	
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CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D206-667-143	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASS'Y (206L HIGH FWD)	NTS
DATE	08.11.06		

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C6-3 **DETAIL D**
SCALE 4X
(VIEW LOOKING FWD)

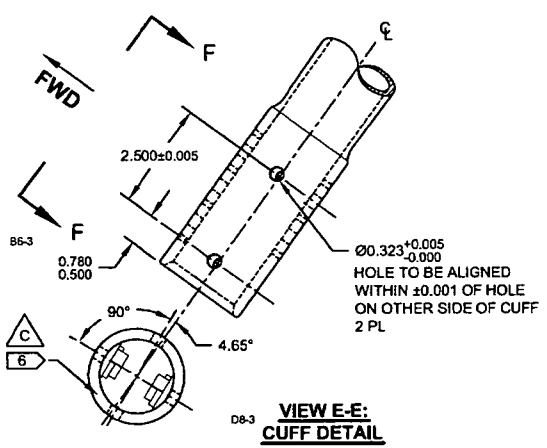
D8-3 **DETAIL D**

A5-3

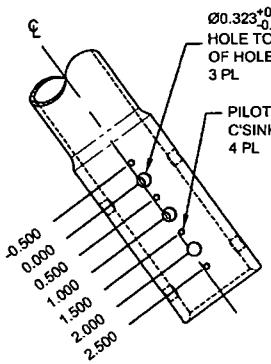
D1-3 **DETAIL H**

C3-3 **DETAIL H**
SCALE 4X
(VIEW LOOKING FWD)

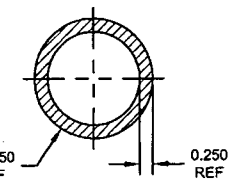
D206-667-503
BENDING AND DRILLING DETAIL
(VIEW LOOKING FWD)



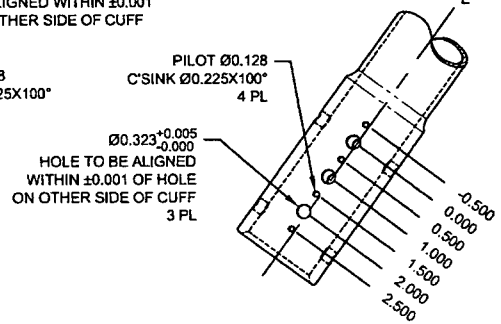
D8-3 **VIEW E-E:**
CUFF DETAIL
SCALE 4X



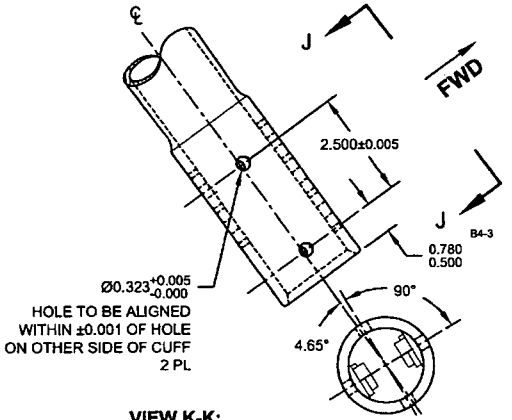
B7-3 **VIEW F-F**
(VIEW LOOKING AFT, ROTATED)



D4-3 **SECTION G-G**
SCALE 5X



B2-3 **VIEW J-J**
(VIEW LOOKING AFT, ROTATED)

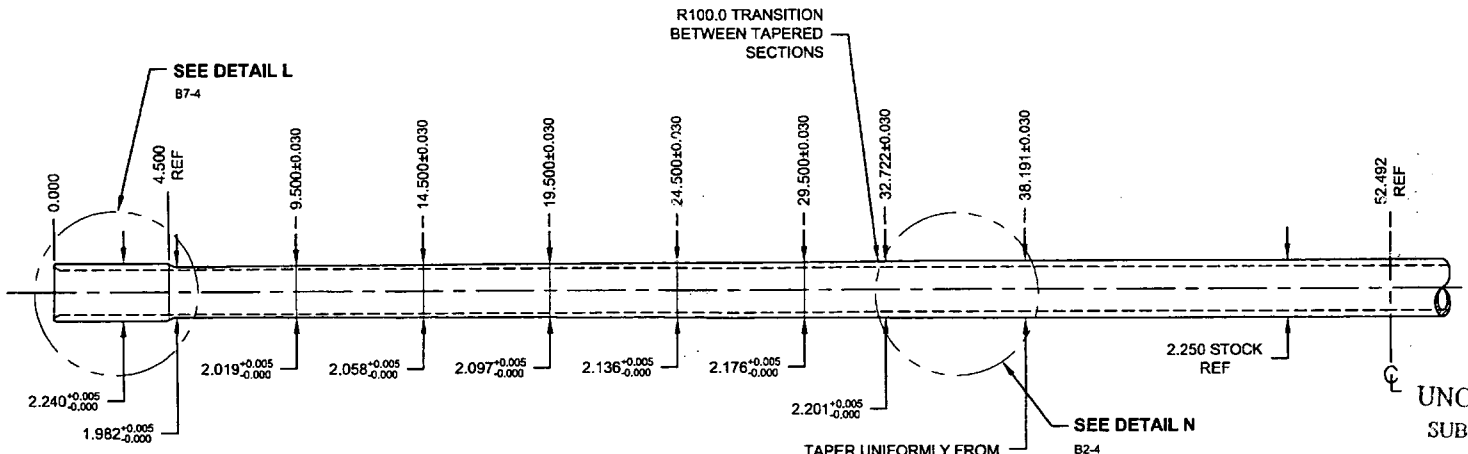


D1-3 **VIEW K-K:**
CUFF DETAIL
SCALE 4X

RELEASED
05/11/12 JMD

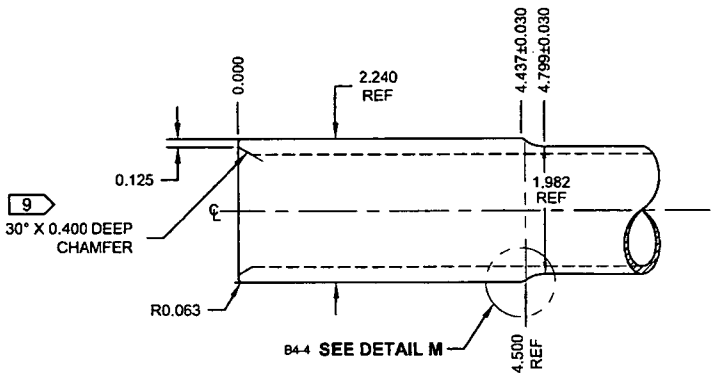
DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D206-667-143 REV. C SHEET 3 OF 4
CHECKED		TITLE CROSSTUBE ASS'Y (206L HIGH FWD) SCALE NTS
MFG. APPR.		
APPROVED		
DE APPR.		
DATE	08.11.06	

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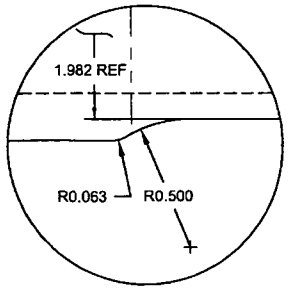


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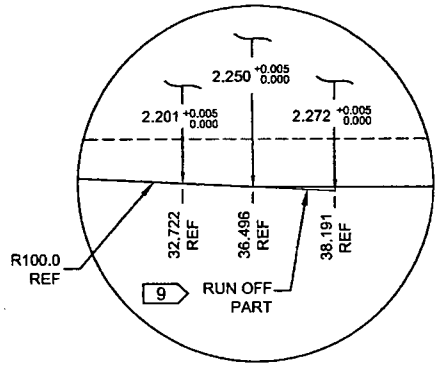
C **TURNING DETAIL**



DETAIL L:
D7-4 **CROSSTUBE CUFF**
NOT TO SCALE



DETAIL M:
A6-4 **CUFF TRANSITION**
NOT TO SCALE



DETAIL N:
C4-4 **TAPER RUN-OFF**
NOT TO SCALE

RELEASED

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D206-667-143 REV. C SHEET 4 OF 4
MFG. APPR.		
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DE APPR.		
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ACUREN

LIQUID PENETRANT TEST REPORT

P- 15309

PAGE 1 OF 1

CLIENT: DART AEROSPACE
ATTENTION: LINDA / CHANTEL
ADDRESS: 1270 ABERDEEN ST. HAWKESBURY ON. K6H 1K7
PROJECT: F. P. I. ON CROSS TUBES
ITEM(S) EXAMINED: 4 UNITS

DATE: NOV. 18-2009 TIME: AM ☑ PM ☐
ACUREN JOB NO.: 188-09-0933
PO/WO NO.: — 10791
WORK LOCATION: SAME
ACCEPTANCE STD.: ASTM 1417 REV./DATE: 2007

JOB DESCRIPTION | PROCEDURE NO. LT-0002 REV./DATE | TECHNIQUE NO. LTTECH 2 REV./DATE

PART NO.: | MATERIAL: ALUDINE ALUMINUM | THICKNESS: —

SCOPE: WET FLUORESCENT LIQUID PENETRANT INSPECTION CARRIED OUT 100% EXTERNAL

TEST DETAILS

METHOD	☑ FLUORESCENT	☐ VISIBLE	☑ WATER WASH	☐ SOLVENT REMOVABLE	☐ POST EMULSIFIED
FAMILY BRAND	MAGNA FLUX		BLACK LIGHT S/N 16459	☐ OUTPUT > 1000 µ W/CM²	☐ AMBIENT < 2 fc
PENETRANT	ZL 67	MINIMUM DWELL TIME 45 ~~10~~ MIN.	LIGHTING EQUIP.	☐ FLASHLIGHT ☐ TROUBLELIGHT	☐ OUTPUT>100 fc @ SURFACE
PENETRANT REMOVER	H2O	MINIMUM DRY TIME >10 MIN.	OTHER	LAB.NO	
DEVELOPER	SKD 52	MINIMUM DWELL TIME 10 MIN.	LIGHT METER S/N	CAL DUE DATE	DEC. 8-2009
DEVELOPER TYPE	☑ NON AQUEOUS	☐ AQUEOUS ☐ DRY			

TEST SURFACE

SURFACE CONDITION	☐ AS GROUND	☐ AS WELDED	☑ MACHINED	☐ SHOT BLASTED	☐ CLEAN BARE METAL
SURFACE TEMPERATURE	☐ < - 4°C/ 20°F	☐ - 4°C/ 20°F TO 10°C/50°F		☑ 10°C/50°F TO 52°C/125°F	☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

1 - CROSS TUBE - W.O. 53275 ✓
1 - CROSS TUBE - W.O. 53276 ✓
1 - CROSS TUBE - W.O. 53277 ✓
1 - CROSS TUBE - W.O. 53278 ✓

09 11 18

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Ken Titley (PRINT) — (SIGNATURE)
TECHNICIAN (SIGNATURE):
NAME (PRINT): M. KELLSTROM (1ST TECHNICIAN) — (2ND TECHNICIAN)
CGSB LEVEL II SNT LEVEL II | CGSB LEVEL ____ SNT LEVEL ____
CGSB REG. NO 6066 | CGSB REG. NO ____

DTR # E-27852
REPORT REVIEWED BY:
NAME | INITIALS

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